

**REMEDIAL INVESTIGATION REPORT ADDENDUM**

**GROUNDWATER INVESTIGATION**

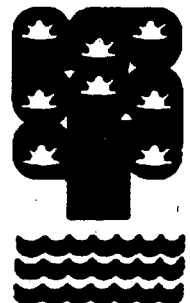
**For**

**EDEGEWATER ASSOCIATES: THE FORMER CELOTEX SITE  
EDGEWATER, NEW JERSEY**

**November 1998**

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**313379**



**REMEDIAL INVESTIGATION WORKPLAN ADDENDUM  
GROUNDWATER INVESTIGATION**

**For**

**EDEGEWATER ASSOCIATES: THE FORMER CELOTEX SITE  
EDGEWATER, NEW JERSEY  
NOVEMBER 1998**

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# **REMEDIAL INVESTIGATION WORKPLAN ADDENDUM**

## **GROUNDWATER INVESTIGATION**

**For**

### **EDEGEWATER ASSOCIATES: THE FORMER CELOTEX SITE EDGEWATER, NEW JERSEY NOVEMBER 1998**

#### **1.0 INTRODUCTION**

During June and July 1998, eight additional monitoring wells (MW-19, MW-20, MW-21, MW-22, MW-31, MW-34, MW-35 and MW-36) were installed in accordance with the New Jersey Department of Environmental Protection (NJDEP) letter dated December 15, 1997. Monitoring wells MW-19 and MW-22 were installed at locations where previous soil sampling results indicated high concentrations of contamination. Monitoring wells MW-20 and MW-21 were installed to horizontally delineate contamination associated with the Ferola/Quanta superfund site along the southern property boundary. Monitoring well MW-31 was installed to vertically delineate contamination associated with the Ferola/Quanta superfund site along the southern property boundary. Monitoring wells MW-34, MW-35 and MW-36 were installed to assess groundwater quality associated with a former aboveground storage tank.

On July 2 and 3, 1998, Enviro-Sciences, Inc. (Enviro-Sciences) obtained groundwater samples at the former Celotex Site in Edgewater, New Jersey from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-10, MW-11, MW-12A, MW-19, MW-20, MW-21 and MW-22. Samples could not be obtained from MW-13 and MW-14 because they were inadvertently damaged during the demolition of Building No.3. The wells have been replaced and are now designated MW-13A and MW-14A.

On September 15 and 16, 1998, monitoring wells MW-13A, MW-14A, MW-31, MW-34, MW-35, and MW-36 were sampled. Monitoring well locations can be seen on Figure 1. Well logs for the additional wells have been constructed and are included as Appendix A.

#### **2.0 GROUNDWATER SAMPLING PROCEDURES**

A low flow purging and sampling technique was used to sample each monitoring well. This technique employs low flow rates for purging and sampling in order to minimize chemical and physical disturbances in the immediate well area. Pumping rates are adjusted to cause minimal drawdown and typically range from 0.1 to 1.0 liters per minute. Groundwater is pumped through a flow-through cell where parameters such as pH, dissolved oxygen, conductivity and temperature are measured. Upon the stabilization of these parameters, samples were obtained from the discharge end of pump for metals and PCB analysis. All other sample parameters were obtained by using a Teflon® bailer.

Samples obtained from MW-1, MW-2, MW-3, MW-4, MW-5, MW-6 and MW-7 were analyzed for volatile organics plus a library search (VO+10), arsenic, total dissolved solids (TDS) and chloride. Samples obtained from MW-10, MW-11 and MW-12A were analyzed for VO+10, TDS and chloride. Samples obtained from MW-13A, MW-14A, MW-31, MW-34, MW-35 and MW-36 were analyzed for priority pollutants plus forty (PP+40), TDS, and chloride. Monitoring wells MW-19, MW-20, MW-21 and MW-22 were analyzed for PP+40. All samples were taken to New Jersey certified laboratory for analysis. The results of the analysis are presented in Tables 1 and 2, and the complete laboratory report has been included as Appendix B.

Depth to water measurements were taken from all wells prior to purging the wells. Data from the tidal study is currently being evaluated and, upon completion (of the tidal study), a groundwater contour map will be provided. Based on preliminary review, the tidal data may affect the interpretation of groundwater gauging data. All previously submitted groundwater contour maps should be viewed as preliminary until the tidal affects on the site are determined. The contour map will be provided with the tidal study results by December 31, 1998.

### **3.0 JULY 1998 GROUNDWATER ANALYTICAL RESULTS**

Sample analysis indicated the presence of the following compounds that exceeded NJDEP groundwater cleanup criteria:

- 1,1-Dichloroethane was detected above the groundwater criterion of 50 ppb in MW-1 at 63.3 ppb and MW-10 at 59.4 ppb respectively.
- 1,1-Dichloroethene was detected above the groundwater criterion of 2 ppb in MW-10 at 2.16 ppb.
- Benzene was detected above the groundwater criterion of 1 ppb in MW-1 at 160 ppb, MW-2 at 55ppb, MW-4 at 131 ppb, MW-6 at 73.7 ppb, MW-7 at 656 ppb, MW-10 at 1.05 ppb, MW-12A at 2.03 ppb, MW-19 at 1.71 ppb, MW-20 at 2.51 ppb, MW-21 at 300 ppb and MW-22 at 1.07 ppb.
- Toluene was detected above the groundwater criterion of 1,000 ppb in MW-21 at 1,390 ppb.
- Ethylbenzene was detected above the groundwater criterion of 700 ppb in MW-21 at 1,820 ppb.
- Total xylenes were detected above the groundwater criterion of 1,000 ppb in MW-4 at 1,050 ppb and MW-21 at 6,240.
- Napthalene was detected above the groundwater criterion of 300 ppb in MW-21 at 4,340 ppb.

- 2,4-Dinitrotoluene was detected above the groundwater criterion of 10 ppb in MW-20 at 28.9 ppb.
- Arsenic was detected above the groundwater criterion of 8 ppb in MW-1 at 6,500 ppb, MW-4 at 94 ppb, MW-6 at 21.4 ppb, MW-7 at 11 ppb, MW-19 at 229 ppb, MW-20 at 2,390 ppb, MW-21 at 733 ppb and MW-22 at 592 ppb.
- Cadmium was detected above the groundwater criterion of 4 ppb in MW-20 at 12 ppb.
- Lead was detected above the groundwater criterion of 10 ppb in MW-19 at 283 ppb, MW-20 at 138 ppb, MW-21 at 11 ppb and MW-22 at 75 ppb.
- Silver was detected above the groundwater criterion of 20 ppb in MW-20 at 490 ppb and MW-21 at 513 ppb.
- Thallium was detected above the groundwater criterion of 10 ppb in MW-20 at 24 ppb.

#### **4.0 SEPTEMBER 1998 GROUNDWATER ANALYTICAL RESULTS**

Sample analysis indicated the presence of the following compounds that exceeded NJDEP groundwater cleanup criteria:

- Benzene was detected above the groundwater criterion of 1 ppb in MW-31 at 7.76 ppb.
- Napthalene was detected above the groundwater criterion of 300 ppb in MW-31 at 502 ppb.
- Arsenic was detected above the groundwater criterion of 8 ppb in MW-13A at 9.34 ppb, MW-14A at 8.98 ppb, MW-31 at 348 ppb, MW-34 at 49 ppb, MW-35 at 51 ppb.
- Cadmium was detected above the groundwater standard of 4 ppb in MW-13A at 8.96 ppb, MW-31 at 7.15 ppb, and MW-35 at 7.4 ppb.
- Copper was detected above the groundwater standard of 1,000 ppb in MW-35 at 1,120 ppb.
- Lead was detected above the groundwater standard of 10 ppb in MW-13A at 257 ppb, MW-14A at 204 ppb, MW-31 at 27 ppb, MW-34 at 149 ppb, and MW-35 at 1,009 ppb and MW-36 at 701 ppb.
- Nickel was detected above the groundwater standard of 100 ppb in MW-31 at 123 ppb.

The electronic data deliverables for the above data will be submitted by December 15, 1998.

## **5.0 CONCLUSIONS**

The United States Environmental Protection Agency (USEPA) is currently conducting a remedial investigation of the Ferola/Quanta Superfund site that includes activities on the Celotex site. Enviro-Sciences will also continue the investigation of the former Celotex site and has requested access to the data generated by the USEPA investigation. The data gathered during the USEPA investigation will be considered when evaluating remedial options. Enviro-Sciences will continue to work with the USEPA and NJDEP in all aspects of this case with the goal of closing the case in timely manner.

**REMEDIAL INVESTIGATION WORKPLAN ADDENDUM**  
**GROUNDWATER INVESTIGATION**

**For**

**EDEGEWATER ASSOCIATES: THE FORMER CELOTEX SITE**  
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**NOVEMBER 1998**

**FIGURE**





**REMEDIAL INVESTIGATION WORKPLAN ADDENDUM**

**GROUNDWATER INVESTIGATION**

**For**

**EDEGEWATER ASSOCIATES: THE FORMER CELOTEX SITE  
EDGEWATER, NEW JERSEY  
NOVEMBER 1998**

**TABLES**

TABLE 1

Edgewater Associates, Inc.  
Former Celotex Site  
Groundwater analytical Results - July 1998

Sample ID #		MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
Lab Sample ID#		3676-007	3676-009	3676-010	3676-006	3676-001	3676-001
Sample Date	NJDEP Groundwater Quality Criteria	7/2/98	7/2/98	7/2/98	7/2/98	7/2/98	7/3/98
<b>PP METALS (mg/l)</b>							
Antimony	0.020	NA	NA	NA	NA	NA	NA
Arsenic	0.008	6.5	0.005	ND	0.094	ND	21.4
Beryllium	0.020	NA	NA	NA	NA	NA	NA
Cadmium	0.004	NA	NA	NA	NA	NA	NA
Chromium	0.100	NA	NA	NA	NA	NA	NA
Copper	1.000	NA	NA	NA	NA	NA	NA
Lead	0.010	NA	NA	NA	NA	NA	NA
Mercury	0.002	NA	NA	NA	NA	NA	NA
Nickel	0.100	NA	NA	NA	NA	NA	NA
Selenium	0.050	NA	NA	NA	NA	NA	NA
Silver	0.020	NA	NA	NA	NA	NA	NA
Thallium	0.010	NA	NA	NA	NA	NA	NA
Zinc	5.000	NA	NA	NA	NA	NA	NA
<b>VO+15 (ug/l)</b>							
1,1-Dichloroethene	2	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	63.3	ND	ND	ND	ND	ND
Chloroform	6	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	30	ND	ND	ND	ND	ND	ND
Benzene	1	160	55	ND	131	ND	73.7
Toluene	1,000	52.7	1.48	ND	164	ND	28.9
Ethylbenzene	700	165	7.54	ND	264	ND	45.2
M,O,P-Xylenes	1,000	168	3.49	ND	1,060	ND	107
Chlorobenzene	50	31.2	ND	ND	ND	ND	ND
TOTAL TARGET VO		640.20	67.51	ND	1,609.00	ND	254.80
TOTAL TIC VO		2,957.00	79.00	ND	12,455.00	ND	6,444.00

J = Concentration was detected below MDL

NLE = No level established

ND = Not detected

NA = Not analyzed for

TABLE 1

Edgewater Associates, Inc.  
Former Celotex Site  
Groundwater analytical Results - July 1998

Sample ID #		MW-1	MW-2	MW-3	MW-4	MW-5	MW-6
Lab Sample ID#		3676-007	3676-009	3676-010	3676-006	3676-001	3676-001
	NJDEP Groundwater Quality Criteria						
Sample Date		7/2/98	7/2/98	7/2/98	7/2/98	7/2/98	7/3/98
<b>AEBN+25 (ug/l)</b>							
1,3-Dichlorobenzene	600	NA	NA	NA	NA	NA	NA
1,4-Dichlorobenzene	75	NA	NA	NA	NA	NA	NA
1,2-Dichlorobenzene	600	NA	NA	NA	NA	NA	NA
1,2,4-Trichlorobenzene	9	NA	NA	NA	NA	NA	NA
Naphthalene	300	NA	NA	NA	NA	NA	NA
2-Methylnaphthalene	NLE	NA	NA	NA	NA	NA	NA
Acenaphthene	400	NA	NA	NA	NA	NA	NA
Dibenzofuran	NLE	NA	NA	NA	NA	NA	NA
Fluorene	300	NA	NA	NA	NA	NA	NA
Phenanthrene	NLE	NA	NA	NA	NA	NA	NA
Carbazole	NLE	NA	NA	NA	NA	NA	NA
Fluoranthene	300	NA	NA	NA	NA	NA	NA
2,4-Dinitrotoluene	10	NA	NA	NA	NA	NA	NA
TOTAL TARGET AE/BN		NA	NA	NA	NA	NA	NA
TOTAL TIC AE/BN		NA	NA	NA	NA	NA	NA
TOTAL CYANIDES (ug/l)	200	NA	NA	NA	NA	NA	NA
PHENOL (ug/l)	4,000	NA	NA	NA	NA	NA	NA
TDS (mg/l)	500	1,840	2,470	1,850	911	628	2,790
CHLORIDE (mg/l)	250	140	520	180	34	180	50
pH	6.5 - 8.5	6.1	6.8	6.8	7.0	6.7	6.9
DISSOLVED OXYGEN (mg/l)	-	13.7	10.2	13.2	13.2	13.4	11.8
CONDUCTIVITY (ms/cm)	-	3.6	3.6	3.6	1.2	1.0	2.9
TEMPERATURE (°C)	-	16	22	16	19	17	16

J = Concentration was detected below MDL

NLE = No level established

ND = Not detected

NA = Not analyzed for

TABLE 1  
Edgewater Associates, Inc.  
Former Celotex Site  
Groundwater analytical Results - July 1998

Sample ID #		MW-7	MW-10	MW-11	MW-12A	MW-19	MW-20	MW-21	MW-22
Lab Sample ID#		3676-008	3676-008	3676-003	3676-002	3676-004	3676-006	3676-005	3676-007
	NJDEP Groundwater Quality Criteria								
Sample Date		7/2/98	7/2/98	7/3/98	7/3/98	7/4/98	7/3/98	7/3/98	7/3/98
<b>PP METALS (mg/l)</b>									
Antimony	0.020	NA	NA	NA	NA	ND	ND	ND	ND
Arsenic	0.008	0.011	NA	NA	NA	0.229	2.39	0.773	0.592
Beryllium	0.020	NA	NA	NA	NA	ND	0.009	ND	ND
Cadmium	0.004	NA	NA	NA	NA	ND	0.012	ND	ND
Chromium	0.100	NA	NA	NA	NA	ND	0.026	ND	ND
Copper	1.000	NA	NA	NA	NA	0.056	0.775	ND	ND
Lead	0.010	NA	NA	NA	NA	0.283	0.138	0.011	0.075
Mercury	0.002	NA	NA	NA	NA	0.002	ND	ND	ND
Nickel	0.100	NA	NA	NA	NA	ND	0.13	ND	ND
Selenium	0.050	NA	NA	NA	NA	ND	ND	ND	ND
Silver	0.020	NA	NA	NA	NA	ND	0.490	0.513	ND
Thallium	0.010	NA	NA	NA	NA	ND	0.024	ND	ND
Zinc	5.000	NA	NA	NA	NA	0.124	0.052	0.048	0.052
<b>VO+15 (ug/l)</b>									
1,1-Dichloroethene	2	ND	2.16	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	50	ND	59.4	ND	1.1	ND	ND	ND	ND
Chloroform	6	ND	ND	ND	ND	0.936	1.92	ND	ND
1,1,1-Trichloroethane	30	ND	153	ND	ND	ND	ND	ND	ND
Benzene	1	656	1.05	0.971	2.03	1.71	2.51	300	1.07
Toluene	1,000	254	ND	ND	1.7	1.62	14.8	1,390	7.84
Ethylbenzene	700	64.4	ND	1.28	2.1	1.9	24.1	1,820	15.5
M,O,P-Xylenes	1,000	221	ND	1.65	4.23	4.18	80.6	6,240	48.6
Chlorobenzene	50	ND	ND	ND	ND	ND	ND	ND	ND
TOTAL TARGET VO		1,195.40	213.45	3.90	11.16	10.35	123.93	9,750.00	73.01
TOTAL TIC VO		690.00	6.00	34.00	68.60	77.70	258.20	17,320.00	133.10

J = Concentration was detected below MDL  
NLE = No level established  
ND = Not detected  
NA = Not analyzed for

TABLE 1

Edgewater Associates, Inc.  
Former Celotex Site  
Groundwater analytical Results - July 1998

Sample ID #		MW-7	MW-10	MW-11	MW-12A	MW-19	MW-20	MW-21	MW-22
Lab Sample ID#		3676-008	3676-008	3676-003	3676-002	3676-004	3676-006	3676-005	3676-007
NJDEP Groundwater Quality Criteria									
Sample Date		7/2/98	7/2/98	7/3/98	7/3/98	7/4/98	7/3/98	7/3/98	7/3/98
<b>AE/BN*25 (ug/l)</b>									
1,3-Dichlorobenzene	600	NA	NA	NA	NA	ND	ND	ND	ND
1,4-Dichlorobenzene	75	NA	NA	NA	NA	ND	ND	ND	ND
1,2-Dichlorobenzene	600	NA	NA	NA	NA	ND	ND	ND	ND
1,2,4-Trichlorobenzene	9	NA	NA	NA	NA	ND	ND	ND	ND
Naphthalene	300	NA	NA	NA	NA	8.57	62.6	4,340	32.2
2-Methylnaphthalene	NLE	NA	NA	NA	NA	1.27	4.02	375	1.33 J
Acenaphthene	400	NA	NA	NA	NA	1.82	2.26	73.3	ND
Dibenzofuran	NLE	NA	NA	NA	NA	ND	ND	50.7	ND
Fluorene	300	NA	NA	NA	NA	ND	1.27	44.2	ND
Phenanthrene	NLE	NA	NA	NA	NA	ND	ND	59.3	ND
Carbazole	NLE	NA	NA	NA	NA	ND	2.8	42.2	ND
Fluoranthene	300	NA	NA	NA	NA	ND	ND	ND	ND
2,4-Dinitrotoluene	10	NA	NA	NA	NA	ND	28.9	ND	ND
TOTAL TARGET AE/BN		NA	NA	NA	NA	11.66	101.85	4,984.70	33.53
TOTAL TIC AE/BN		NA	NA	NA	NA	ND	96.2	7,788.00	33.2
TOTAL CYANIDES (ug/l)	200	ND	ND	NA	NA	ND	ND	0.18	ND
PHENOL (ug/l)	4,000	ND	ND	NA	NA	ND	ND	ND	ND
TDS (mg/l)	500	1970	803	1,850	1,950	NA	NA	NA	NA
CHLORIDE (mg/l)	250	410	58	340	340	NA	NA	NA	NA
pH	6.5 - 8.5	6.9	5.8	7.0	6.5	7.0	6.9	7.1	6.8
DISSOLVED OXYGEN (mg/l)	-	12.7	12.4	13.2	12.7	12.7	13.8	10.7	12.9
CONDUCTIVITY (ms/cm)	-	2.9	1.3	2.9	2.8	2.3	3.8	0.62	3.3
TEMPERATURE (°C)	-	18	19	15	16	16	16	22	19

J = Concentration was detected below MDL

NLE = No level established

ND = Not detected

NA = Not analyzed for

TABLE 2

Edgewater Associates, Inc.  
Former Celotex Site  
Groundwater analytical Results - September 1998

Sample ID#		MW-13a	MW-14a	MW-31	MW-34	MW-35	MW-36
Lab Sample ID#		5516-002	5516-001	5516-003	5449-001	5449-002	5449-003
Sample Date	NJDEP Groundwater Quality Criteria	9/17/98	9/17/98	9/17/98	9/15/98	9/15/98	9/15/98
<b>PP METALS (mg/l)</b>							
Antimony	0.020	ND	ND	ND	ND	ND	ND
Arsenic	0.008	0.00934	0.00898	0.348	0.049	0.051	ND
Beryllium	0.020	ND	ND	ND	ND	ND	ND
Cadmium	0.004	0.00896	ND	0.00714	0.00086	0.0074	0.00157
Chromium	0.100	0.021	ND	0.103	ND	ND	ND
Copper	1.000	0.091	0.09	0.743	0.048	1.12	0.049
Lead	0.010	0.257	0.204	0.027	0.149	1.09	0.701
Mercury	0.002	ND	ND	ND	ND	ND	0.00073
Nickel	0.100	0.097	0.026	0.123	ND	0.031	0.023
Selenium	0.050	ND	ND	ND	ND	ND	ND
Silver	0.020	ND	ND	0.00045	ND	ND	ND
Thallium	0.010	ND	ND	ND	ND	ND	ND
Zinc	5.000	1.64	0.251	2.85	0.222	0.85	0.556
<b>VO+15 (ug/l)</b>							
1,1-Dichloroethane	50	1.1	2.37	ND	ND	ND	ND
Chloroform	6	ND	ND	4.16	ND	ND	ND
Benzene	1	ND	ND	7.76	ND	ND	ND
Toluene	1,000	ND	ND	13.7	ND	ND	ND
Ethylbenzene	700	ND	ND	27.4	ND	ND	ND
M,O,P-Xylenes	1,000	ND	ND	67.4	ND	2.27	ND
TOTAL TARGET VO		1.10	2.37	120.42	ND	2.27	ND
TOTAL TIC VO		8.6	5.2	1237.2	ND	128.1	8

J = Detected below MDL  
NLE = No level established  
CS = Compound specific  
NA = Not analyzed for  
ND = Not detected

TABLE 2

Edgewater Associates, Inc.  
Former Celotex Site  
Groundwater analytical Results - September 1998

Sample ID #		MW-13a	MW-14a	MW-31	MW-34	MW-35	MW-36
Lab Sample ID#		5516-002	5516-001	5516-003	5449-001	5449-002	5449-003
Sample Date	NJDEP Groundwater Quality Criteria	9/17/98	9/17/98	9/17/98	9/15/98	9/15/98	9/15/98
<b>AEBN+25 (ug/l)</b>							
Naphthalene	300	ND	ND	502	ND	ND	ND
Acenaphthylene	NLE	ND	ND	8.09 J	ND	ND	ND
2-Methylnaphthalene	NLE	ND	ND	120	ND	ND	ND
Acenaphthene	400	ND	ND	27.7	ND	ND	ND
Dibenzofuran	NLE	ND	ND	14.9	ND	ND	ND
Fluorene	300	ND	ND	21.7	ND	ND	1.24 J
Phenanthrene	NLE	ND	ND	25.8	ND	ND	2.05
Carbazole	NLE	ND	ND	7.9 J	ND	ND	ND
Fluoranthene	300	ND	ND	ND	ND	ND	2.46
Pyrene	200	ND	ND	ND	ND	ND	2.37
TOTAL TARGET AE/BN		ND	ND	728.09	ND	ND	8
TOTAL TIC AE/BN		ND	ND	184	10.2	476.6	ND
PCB (ug/l)	0.500	ND	ND	ND	3.49	ND	ND
Pesticides (ug/l)	CS	ND	ND	ND	ND	ND	ND
Total Cyanides (mg/kg)	200	ND	ND	ND	ND	ND	ND
Phenol (ug/l)	4,000	ND	ND	ND	ND	ND	ND
TDS (mg/l)	500	1,740	2,110	4,400	3240	2370	1960
Chloride (mg/l)	250	240	250	230	180	60	90
pH (6.5 - 8.5)		6.1	8.4	7.0	6.1	6.6	7.6
DISSOLVED OXYGEN (mg/l)		9.8	9.8	9.1	11.7	10.0	9.5
CONDUCTIVITY (ms/cm)		0	0	0	2.7	2.9	0.3
TEMPERATURE (°C)		20	20	24	20	21	20

J = Detected below MDL  
NLE = No level established  
CS = Compound specific  
NA = Not analyzed for  
ND = Not detected

**REMEDIAL INVESTIGATION WORKPLAN ADDENDUM**  
**GROUNDWATER INVESTIGATION**

**For**

**EDEGEWATER ASSOCIATES: THE FORMER CELOTEX SITE**  
**EDGEWATER, NEW JERSEY**  
**NOVEMBER 1998**

**APPENDIX A**

**Well Logs**





## Log of Monitoring Well: MW-19

Client: Demetr

Project: Celotex

Site Location: Edgewater, NJ

Casing Diameter: 4"

Screen Type/Range: .01/7-17"

Flush/Stick-up: Stick-up

Packing Type: #0

Drilling Method: Air Rotary/Hollow Stem

WELL CONSTRUCTION AND LITHOLOGY					
Depth	Construction	Symbol	Description	USC	Remarks
0			Ground Surface		
1					
2					
3					
4			<i>Fill</i> Construction material consisting of Concrete and Wood with large Boulders		
5					
6					
7					
8					
9					
10					
11					
12			<i>Fill</i> Bricks, Brick fragments, Cinder with some Sand and Silt		
13					
14					
15					
16					
17					
18			<i>Clay</i> Black Organic		
19			End of Borehole		
20					
21					
22					
23					

Logged By: D. Neumann

Drilled By: Horizon Drilling

Date: 6/10/98

Permit Number: 2648396

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Enviro-Sciences, Inc.  
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## Log of Monitoring Well: MW-20

Client: Demetr

Project: Celotex

Site Location: Edgewater, NJ

Casing Diameter: 4"

Screen Type/Range: .01/7-17"

Flush/Stick-up: Stick-up

Packing Type: #0

Drilling Method: Air Rotary/Hollow Stem Auger

WELL CONSTRUCTION AND LITHOLOGY					
Depth	Construction	Symbol	Description	USC	Remarks
0			Ground Surface		
1					
2					
3					
4			<i>Fill</i>		
5			Construction material consisting of Concrete and Wood with large Boulders		
6					
7					
8					
9					
10					
11					
12			<i>Fill</i>		
13			Bricks, brick fragments, Cinder with some Silt and Sand		
14					
15					
16					
17					
18			<i>Clay</i>		
19			Black and Organic		
20			End of Borehole		
21					
22					
23					

Logged By: D. Neumann

Drilled By: Horizon Drilling

Date: 6/10/98

Permit Number: 2648397

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## Log of Monitoring Well: MW-21

Client: Demetr

Project: Celotex

Site Location: Edgewater, NJ

Casing Diameter: 4"

Screen Type/Range: .01/7.5-17.5'

Flush/Stick-up: Stick-up

Packing Type: #0

Drilling Method: Air Rotary/Hollow Stem Auger

WELL CONSTRUCTION AND LITHOLOGY					
Depth	Construction	Symbol	Description	USC	Remarks
0			Ground Surface		
1					
2					
3					
4			<i>Fill</i>		
5			Construction material consisting of Concrete and Wood with large Boulders		
6					
7					
8					
9					
10					
11					
12					
13			<i>Fill</i>		
14			Bricks, brick fragments, Cinder with some Sand and Silt		
15					
16					
17					
18			<i>Clay</i>		
19			Black and Organic		
20			End of Borehole		
21					
22					
23					

Logged By: D. Neumann

Drilled By: Horizon Drilling

Date: 6/11/98

Permit Number: 2648398

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## Log of Monitoring Well: MW-22

Client: Demetr

Project: Celotex

Site Location: Edgewater, NJ

Casing Diameter: 4"

Screen Type/Range: .01/7-17"

Flush/Stick-up: Stick-up

Packing Type: #0

Drilling Method: Air Rotary/Hollow Stem Auger

WELL CONSTRUCTION AND LITHOLOGY						
Depth	Construction	Symbol	Description	USC	Blow count	OVA PPM
0			Ground Surface			
1						
2						
3						
4			<i>Fill</i>			
5			Construction material consisting of Concrete and Wood with large Boulders			
6						
7						
8						
9						
10						
11						
12			<i>Fill</i>			
13			Bricks, brick fragments, Cinder with some Sand and Silt			
14						
15						
16						
17			<i>Clay</i>			
18			Black and Organic			
19			End of Borehole			
20						
21						
22						
23						

Logged By: D. Neumann

Drilled By: Horizon Drilling

Date: 6/11/98

Permit Number: 2648399

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## Log of Monitoring Well: MW-31

Client: Demetr

Project: Celotex

Site Location: Edgewater, NJ

Casing Diameter: 2"

Screen Type/Range: .01/

Flush/Stick-up: Stick-up

Packing Type: #0

Drilling Method: Air Rotary/Hollow Stem Auger

WELL CONSTRUCTION AND LITHOLOGY					
Depth	Construction	Symbol	Description	USC	Remarks
0			Ground Surface		
1					
2					
3			<i>Fill</i>		
4			Construction material consisting of Concrete and Wood with large Boulders		
5					
6					
7					
8					
9			<i>Fill</i>		
10			Bricks, brick fragments, Cinder with some Sand and Silt		
11					
12					
13					
14					
15					
16					
17					
18			<i>Sand</i>		
19			Brown, grey		
20					
21					
22					
23					

Logged By: D. Neumann

Drilled By: Horizon Drilling

Date: 7/10/98

Permit Number: 2651207

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## Log of Monitoring Well: MW-31

Client: Demetr

Project: Calotex

Site Location: Edgewater, NJ

Casing Diameter: 2"

Screen Type/Range: .01/

Flush/Stick-up: Stick-up

Packing Type: #0

Drilling Method: Air Rotary/Hollow Stem Auger

WELL CONSTRUCTION AND LITHOLOGY						
Depth	Construction	Symbol	Description	USC	Blow count	OVA PPM
24						
25						
26						
27			Clay Organic			
28						
29						
30						
31						
32						
33						
34						
35			Sand Brown, grey with little gravel			
36						
37						
38						
39						
40						
41			End of Borehole			
42						
43						
44						
45						
46						

Logged By: D. Neumann

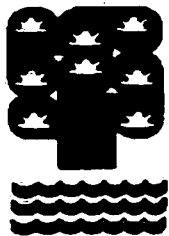
Drilled By: Horizon Drilling

Date: 7/10/98

Permit Number: 2651207

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## Log of Monitoring Well: MW-34

Client: Demetr

Project: Celotex

Site Location: Edgewater, NJ

Casing Diameter: 4"

Screen Type/Range: .01/7.5-17.5'

Flush/Stick-up: Stick-up

Packing Type: #0

Drilling Method: Air Rotary/Hollow Stem Auger

WELL CONSTRUCTION AND LITHOLOGY						
Depth	Construction	Symbol	Description	USC	Blow count	OVA PPM
0			Ground Surface			
1						
2						
3						
4			<i>Fill</i>			
5			Construction material consisting of Concrete and Wood with large Boulders			
6						
7						
8						
9						
10						
11						
12						
13			<i>Fill</i>			
14			Brick, brick fragments, Cinder with some Sand and Silt			
15						
16						
17						
18			<i>Clay</i>			
19			Black and Organic			
20			End of Borehole			
21						
22						
23						

Logged By: D. Neumann

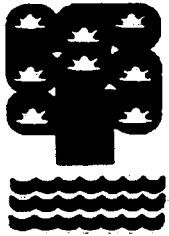
Drilled By: Horizon Drilling

Date: 7/15/98

Permit Number: 2651337

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## Log of Monitoring Well: MW-35

Client: Demetr

Project: Celotex

Site Location: Edgewater, NJ

Casing Diameter: 4"

Screen Type/Range: .01/7.5-17.5'

Flush/Stick-up: Stick-up

Packing Type: #0

Drilling Method: Air Rotary/Hollow Stem Auger

WELL CONSTRUCTION AND LITHOLOGY						
Depth	Construction	Symbol	Description	USC	Blow count	OVA PPM
0			Ground Surface			
1			<i>Fill</i> Construction material consisting of Concrete and Wood with large Boulders			
2						
3						
4						
5						
6						
7						
8			<i>Fill</i> Brick, brick fragments, Cinder with some Sand and Silt			
9						
10						
11						
12						
13						
14						
15			<i>Clay</i> Black and Organic			
16						
17			End of Borehole			
18						
19						
20						
21						
22						
23						

Logged By: D. Neumann

Drilled By: Horizon Drilling

Date: 7/19/98

Permit Number: 2651338

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## Log of Monitoring Well: MW-36

Client: Demetr

Project: Celotex

Site Location: Edgewater, NJ

Casing Diameter: 4"

Screen Type/Range: .01/6.5-16.5'

Flush/Stick-up: Stick-up

Packing Type: #0

Drilling Method: Air Rotary/Hollow Stem Auger

WELL CONSTRUCTION AND LITHOLOGY						
Depth	Construction	Symbol	Description	USC	Blow count	OVA PPM
0			Ground Surface			
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						

Logged By: D. Neumann  
 Drilled By: Horizon Drilling  
 Date: 7/15/98

Permit Number: 2651339  
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